AGRICULTURAL DEVELOPMENT IN GERMAN-SPEAKING SETTLEMENTS OF THE STEPPE ZONE OF SOUTHERN UKRAINE (MID-19TH - EARLY 20TH CENTURY)

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ABSTRACT

The article analyzes the issue of agricultural development of German-speaking colonists who lived in the steppe zone of Ukraine. The article analyzes the general features and main directions of development of this process and the reasons that caused it. The main attention is paid to the process of transformation of colonial agriculture. Until the 1860s, the most important and profitable branch of agriculture of the colonists was cattle breeding. However, due to rising grain prices, the importance of agriculture in German-speaking settlements is growing, which is now gradually becoming the basis of their economic development. Changing market needs have actually led to a complete restructuring of their internal structure. From now on it was reoriented to commodity production of grain crops. It was the need to achieve high profitability that forced colonists to use hired labor, agricultural machinery, and so on more widely than on other farms. This process also coincided with the widespread spread of colonial land tenure in the new territories of the region, which had an impact on certain changes in the natural environment. The methods of ecosystem analysis and synthesis used in our work are based on a comprehensive analysis of environmental components, identification of key factors in the functioning of an integrated agricultural system, identification of features that distinguish Mennonite colonies from others and determine the level of its uniqueness. The comparative research method is applied to the comparison of Mennonite agricultural landscapes with others. German-speaking colonists were the first to use 4 complete farming systems and actively used mineral and organic fertilizers. They carried out active reclamation work, for which cascades of ponds were created on the rivers.

In the late 19th century, a number of publications noted the progressive agricultural methods of the colonists. This influenced the spread of progressive methods among other ethnic groups and denominations. In this way, the study of the historical experience of using nature makes it possible to assess the nature of the transformation of natural complexes, as well as to identify the features of the rationality of historical systems of nature management.

Key words: agricultural machinery, agricultural implements, natural landscape

INTRODUCTION

The study of the history of the Germans and Mennonites of Southern Ukraine remains relevant today. These include, in particular, the question of determining their place in the overall economic development of this region of the then Russian Empire in the post-reform era, as well as their role in the gradual change of the entire steppe landscape of the region. First of all, this applies to colonial agriculture, in particular such important industries as agriculture and livestock, which at that time played a leading role in the economy of the colonists.

It should be noted that so far, this topic is insufficiently covered in the pages of modern scientific journals. To some extent, it is noted in the study of some pre-revolutionary specialists (K.A. Werner, V.E. Postnikov, S. Kharizomenov) and modern domestic scientists (M.V. Belikova, T.K. Zakharchenko), who partially considered this issue in his works [1-4].

The purpose of the article is to clarify the main directions of agricultural development in the German and Mennonite settlements in the steppe southern region of Ukraine at that time.

In the middle of XIX - early XX centuries. agricultural production itself was the basis of the economic life of the German-speaking colonies of Southern Ukraine. Its most important branch was agriculture, but until the middle of the nineteenth century it was not of leading importance. The main part of the grown grain was used for domestic needs. At that time, most of the farm's income came from livestock, primarily from the breeding of fine-wool sheep. Wool has long been in great demand in the market of the South. This has been repeatedly emphasized by pre-revolutionary researchers, in particular A. Skalkovsky [5, 42].

METHODS OF RESEARCH

A number of general scientific and disciplinary methods were used. Thus, the purpose and objectives of the study defined the theoretical and methodological approach to knowledge of historical reality, which is based on dialectical methods of knowledge. This study is also based on the principle of historicism, which is concretized by the approach to historical phenomena and processes from the standpoint of not statics but dynamics, the study of the relationships between them and their interdependence. The application of this principle allows us to study the dynamics of the historical process in terms of its past and future trends.

The methods of ecosystem analysis and synthesis used in our work are based on a comprehensive analysis of environmental components, identification of key factors in the functioning of an integrated agricultural system, identification of features that distinguish Mennonite colonies from others and determine the level of its uniqueness. The comparative research method is applied to the comparison of Mennonite agricultural landscapes with others.

DISCUSSION

The internal structure of the colonist lands was also appropriate. Most of them were intended for cattle grazing. The situation began to change in the early 1860s, when under the influence of new economic factors, the Germans and Mennonites began to

restructure their farms. Since then, in the new economic development of the country, the importance of bread production is gradually increasing, which is becoming one of the most important exports. This was facilitated by the construction of railways connecting the central region of Russia with its ports on the Black and Azov Seas. It was through them that the bulk of Russia's grain exports went. The increase in the marketability of bread was accompanied by falling prices for livestock products, primarily wool. The change in market conditions prompted the colonists to adapt to the new conditions of the all-Russian market, gradually reorienting their farms exclusively to commodity production of grain crops. This process in one way or another affected the development of agriculture throughout southern Ukraine, and the Germans and Mennonites were no exception.

Commodity production of grain directly depended on the economic capacity of the farms themselves. The larger they were, the more opportunities there were for the production of bread and other agricultural products for sale. In small farms, these opportunities were significantly limited, as most of the bread did not go to the market, but to meet domestic needs. Therefore, the colonists, who had much larger plots of land than other groups in the south of Ukraine, were able to adapt much better to the new economic conditions. Adaptation to the new market situation led to changes in the internal structure of colonist farms. Their characteristic feature was the increase in the total area of arable land due to the areas previously used for the development of livestock. This process was gradual and in some places had certain regional features. Thus, the Germans of Bakhmut district of Ekaterinoslavskaya gubernia sheep breeding remained the leading industry until the mid-80's of the XIX century, while in many regions it came to naught much earlier [6, 72].

In the middle of the XIX century. in most colonist districts, the land allotted for livestock was still a high percentage of arable land, but over time this ratio began to change gradually. Thus, in the Molochansk district, according to the early 60's of the XIX century, it was 61.5% and 38.5%, respectively [7, 153]. In other words, at this time the structure of agricultural land focused primarily on creating a fodder base for livestock.

At the same time, the process of reducing land areas for pastures and hayfields and expanding them under arable land is gaining momentum. Thus, according to the colonies of another, Khortytsky district, in the late 60's of the XIX century. this ratio was already 41% and 37.3%, respectively [8, 146–149].

At this time, an indicator of the growing role of agriculture is not only an increase in arable land in the structure of colonial farms, but also the redevelopment of much of the land of public sheep farms. In most colonies of this district, the area of arable land at this time already exceeded the area of pastures, although the latter were still quite large.

At the end of the 1980's, one full farm, on average, already accounted for 42-45 acres of arable land (69-70% of the total area). For example, according to the data of 1884–1886, 34 German colonies of Pryshibska and Eigenfeldska volost had 53484 acres of land under arable land, which was 69.5% of the total area of agricultural land, while only 23512 acres were allocated for pastures. or 30.5% of these areas. The latest figures indicate a further increase in the leading role of agriculture in the structure of farms [9, 77].

This trend persisted in the early twentieth century, as evidenced by the examples of the already mentioned settlements of Pryshibska volost. Thus, according to the materials of 1912, the internal structure of their land tenure was as follows: homesteads - 1.9%, arable land - 77.7%, pastures and hayfields - only 14.8% [10, 9]. This was typical of other German and Mennonite colonies in Southern Ukraine.

The composition of cereal crops grown in the colonist farms of the time was determined by the natural and climatic conditions of the region and market conditions, which the Germans and Mennonites had a clear marketable character. Preference was given to crops that were sold at the highest prices, namely - food grain. Other crops were secondary and were used, as a rule, for the internal needs of the farms themselves.

According to the data for 1912, with the total sown area of Pryshibska volost of 40036 desiatins, 24,845 desiatins (62%), were allocated for wheat. Thus, wheat was grown on the main part of the sown area at that time. The share of other cereals was much smaller [11, 412].

The Germans and Mennonites planted several varieties of spring and winter wheat. Thus, in the late nineteenth century. such winter varieties as Sandomirsky, Banatka, Biloturka and Chervonokoloska were popular. Among spring wheat, preference was given to Arnautka and Hornivka.

Note that the distribution of these varieties was influenced by natural and climatic features of each region. This can be considered on the example of the Tavricheskaya gubernia. The soils of the northern and central districts of Berdyansk and Melitopol uezd were represented by fertile chernozem. Its area gradually decreased in the western direction, where it turned into loam and sandstone in the Dnieper district. Heavy clay soils were widespread in the southern districts of Melitopol and Berdyansk counties, which again turned into chernozem in the Crimea. This has led to some differences in the structure of cereals in these areas. Thus, in the late nineteenth - early twentieth century. in the chernozem areas, spring wheat crops predominated, and in the Crimea and in the southern regions of Melitopol and Berdyansk counties, winter wheat prevailed. In the Dnieper district, the local population grew mainly rye on large sown areas.

Spring wheat was sown for a long time in the German and Mennonite colonies of the second half of the 19th century. Note that, in contrast to winter varieties, it had lower yields, but better adaptation to the difficult climatic conditions of the southern regions of Ukraine. However, since the 1970s, winter wheat crops have been gradually increasing in colonist farms, especially on the relatively barren soils of the South of Melitopol uezd and part of the Steppe Crimea. Already at the end of the 19th century, the main part of the entire sown area was allotted for the winter in these territories.

The situation on chernozem lands was somewhat different, in particular in the colonies of Pryshibska volost. In the early twentieth century, colonists preferred spring wheat, which was valued for its relatively stable yields. However, even here the general trend changed in the direction of a gradual decrease in spring area due to an increase in the sown area of winter wheat.

In addition to various varieties of wheat, German colonists grew rye, barley and corn. However, compared to wheat, the share of these crops in the colonist farms was much smaller, and these grains were used mainly for domestic needs. For example, barley and

corn, as a rule, went to fatten cattle. The lack of popularity of these crops was due to the fact that they had a low market value.

For German colonists, technical cultures were almost irrelevant. Only in some settlements part of the arable land was allocated for flax crops in some years.

Agricultural techniques of land use in German and Mennonite farms had certain features. Unlike local peasants and some other foreign colonists (including Bulgarians), they widely used pure steam (often early) along with toloka (pasture) and various types of steam plants (corn, potatoes, melons).

This agronomic technique involved the sequential withdrawal for some time from crop rotation of individual parts of arable land (steam) to restore its fertility. At the same time, the use of steam plants made it possible to increase the yield, and hence the profitability of the colonist economy, despite a temporary decrease in its total sown area.

Steam treatment was initiated by the Germans and Mennonites in the 1840s and 1850s and later became widespread. Since the 1880s, along with black steam, for example, the Germans of the Tavricheskaya gubernia have been spreading a new variety, two-year-old green steam, which has protected deer much better from weeds and increased yields. The use of the steam system provided for consistent crop rotation of different crops in order to achieve their high yields and maximum farm profits [12, 42].

RESULTS

In general, the Germans and Mennonites did not have a single crop rotation system at that time. In the late nineteenth - early twentieth century. A significant number of colonies used four-field circulation according to the following scheme: 1st year - steam, melons, 2nd year - wheat, 3rd year - barley, 4th year - wheat, rye, oats. At the same time, many colonist settlements used other forms of crop rotation, which took better account of the peculiarities of a particular area.

For example, the flock of the flock used the eight-field circulation, introduced here in 1894 on the recommendation of local Zemstvo agronomists. It had the following sequence: 1-2 years – toloka (pasture), 3-5 years - bread, 6th year - melons and corn, 7-8 years - bread [13, 31].

In some colonies, two different crop rotations were used at the same time, for example, regular and three-field (the 1st year – toloka (pasture), 2-3rd years - crops of different crops). In the Franztal colony of Gnadenfeld parish, five-field circulation was preferred: 1st year – toloka (pasture), 2nd year - bread, 3rd year - corn, 4-5th year - bread [14, 31–32].

The growth of efficiency of German farms in the second half of the nineteenth century. The colonists' active use of new, more advanced agricultural machinery and implements greatly contributed to this. Most of them were improved and made by the colonists themselves.

The widespread introduction of machines in colonist farms was explained by the increase in the commodity nature of their production, focused primarily on the market. The farms of the German colonists were relatively large and had a limited number of

workers. The use of new agricultural machinery and tools gave them the opportunity not only to perform various field work faster, but also to significantly increase their volume. Labor cost savings have become important. According to some experts of the time, this significantly affected the high profitability of colonial farms and their overall economic profitability.

New, improved tools made at small colonist enterprises were in high demand not only among the colonists but also among local peasants. Thus, the Germans played a leading role in the process of mechanization of agriculture in the South, which began in the second half of the nineteenth century and gradually covered the entire southern region.

German colonists, compared to other categories of peasants, were better provided with agricultural implements. The report of the Berdyansk Zemstvo on the state of agriculture in 1889 stated, among other things, that in the county for every 100 farms there were, on average, 26.8 agricultural machines, while the Germans and Mennonites, these figures were 88 and 78 machines. respectively (3-3.5 times more) [15, 40–41].

The number and list of plowshares largely depended on the size of the farms themselves. Statistics show that the more land the farm had, the better it was provided with the technical means to cultivate it. The colonists used mostly single-body plows, which required fewer horses. Bookers and ribbed rollers were used for pre-sowing tillage. Farming was carried out with iron harrows, grass sowing and other agronomic techniques, which were considered advanced at that time, were widely used.

Extensive use of advanced agricultural machinery and certain agricultural techniques allowed German colonists to harvest relatively high yields. At the same time, the yield of different crops was not always stable and fluctuated in some years, which is typical for different southern territories and modern Ukraine.

At the same time, statistical materials show that the yield in large private farms was quite high. The average yield of different crops in the farms of the colonists was higher than in other categories of peasants.

The colonists sold most of their harvest in domestic regional markets. The places of sale of agricultural products were the colonies themselves and their township centers, as well as individual settlements and towns located nearby. For example, for the Germans and Mennonites of Melitopol and Berdyansk uezd, such centers were such large settlements as: Mykhailivka, Vasylivka, Pryshib, Tokmak, as well as the city of Melitopol. The colonists sold some of their bread directly in the coastal ports, in particular in Genichesk or Berdyansk, where it was exported.

Most colonists sold their products on their own. At the same time, a significant part of it, especially in large private colonist farms, was centrally bought by individual procurement companies for further resale.

The range of products sold by the Germans was not varied and depended primarily on the needs of the market itself. It was based primarily on cereals - wheat, rye, barley, rarely - corn.

Wheat had the highest and most stable price on the market, in particular in coastal cities, which made them particularly attractive places for trade. Therefore, for example, many Mennonites of Gnadelfeldska volost in Berdyansk uezd, despite the great distance, tried

to transport grain for sale to the center of their uezd – Berdyansk, where there were quite high prices for bread. Prices for other cereals were much lower.

CONCLUSION

Closely related to the above processes was the widespread spread of colonial land tenure to new territories at this time. By the middle of the XIX century. the basis of German land ownership were the so-called allotted lands. They were provided to the Germans and Mennonites during their resettlement in Russia and were formed at the expense of state or specially purchased by the state private lands. Data from the 10th revision in 1858 show that at that time there were at least 192 German and Mennonite colonies in the three southern provinces of the Russian Empire, which owned 473,502 tithes of allotted land. Compared to the total land area of the three provinces, this was only 2.6% of their total area. However, on the eve of the First World War, this figure, compared to the middle of the nineteenth century, increased almost 4.5 times. At this time, Germans and Mennonites, who accounted for only 5-6% of the region's population, already owned at least 16% of its total land area. Taking into account the leased lands, this figure was even higher. These data confirm the conclusion about the formation at this time, due to the active land expansion of the Germans, large colonial landholdings in southern Ukraine with its gradual transformation into an influential economic force in the region. In many cases, these were the so-called "state" or virgin steppe lands, which were quickly ruined, significantly changing the surrounding landscape of the whole region. However, these processes were only part of the overall economic restructuring of the entire south of Ukraine and its formation in one of the most economically developed areas of the then Russian Empire.

Thus, in the second half of the nineteenth century, colonial agriculture gradually became the leading branch of colonial economy. This was due to several reasons, the main of which is the general increase in the marketability of agricultural products in the region, primarily bread. The high level of productivity of these farms was determined, first of all, by their relatively large size, extensive use of new, improved agricultural machinery, advanced agricultural machinery and hired labor. Thus, colonial farms played a significant role, both in the economic development of the entire southern region, and in certain natural and landscape changes that took place in these areas.

German-speaking colonists were the first to use 4 complete farming systems and actively used mineral and organic fertilizers. They carried out active reclamation work, for which cascades of ponds were created on the rivers.

In the late 19th century, a number of publications noted the progressive agricultural methods of the colonists. This influenced the spread of progressive methods among other ethnic groups and denominations.

In this way, the study of the historical experience of using nature makes it possible to assess the nature of the transformation of natural complexes, as well as to identify the features of the rationality of historical systems of nature management.

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